

## Biological Warfare Studied At The Hopkins

**\$1,000,000 Research  
Done in 11 Years On  
Defensive Aspects**

By STEPHEN J. LINTON

Doctors at the Johns Hopkins University have done more than \$1,000,000 worth of research on biological warfare over the past eleven years, university officials acknowledged yesterday.

However, the research was "exclusively" on methods of preventing and treating diseases caused by biological warfare, according to Dr. Leighton E. Cluff, the Hopkins professor who headed the biological warfare project.

Dr. Cluff, who is now chairman of the medical department of the University of Florida, explained that the Hopkins project stemmed from a military contract for "research and investigation of the pathogenesis (cause), prophylaxis (prevention), and treatment of infection."

The existence of Hopkins studies in biological warfare was revealed in the January 13 issue of *Science* magazine. In an article on chemical and biological weapons, Elinor Langer, a staff writer for the magazine, commented:

"Between 1955 and 1963 the Johns Hopkins received over \$1,

000,000 for work described as 'studies of actual or potential injuries or illnesses, studied on diseases of potential BW (biological warfare) significance and evaluation of certain clinical and immunological responses to certain toxoids and vaccines.'"

"Hopkins reports that its work, which is continuing at a reduced level, produced no results published in open literature."

The University of Pennsylvania has been wracked by disputes in recent years over its engagement in biological warfare projects.

### Contract Acknowledge

Bruce J. Partridge, administrative vice president at the Johns Hopkins University, acknowledged: "There was such a contract."

He pointed out, however, that contracts for research projects are prompted by the requests of individual doctors rather than by the university itself. The university, nevertheless, must give its consent.

The two Hopkins doctors most closely associated with the project are no longer at the university, he commented. Dr. Cluff left the Hopkins in 1966 to assume his post at the University of Florida, and Dr. Ivan Bennett has taken a leave of absence to work as a Federal scientific adviser in Washington.

H. Ridgely Warfield, director of the Institute for Cooperative Research at the Hopkins, said he believed the biological warfare research contract ran from 1953 to 1960.

### Some Continued

"Some of that work has been continued since, although in a different context," he observed. He commented he was not sufficiently familiar with the present projects to say more than that they now have a different scope.

Dr. Cluff stated that the Hopkins had a contract with the Army Biological Laboratory at Fort Detrick, near Frederick, Md., from 1955 to last March 1.

Although the contract did not specifically oblige Hopkins re-

searchers to study biological warfare, Dr. Cluff said that, in practice, "that was the whole aim of it."

He observed that none of the research involved design of weapons. "It was all defensive," he said.

### Examples Noted

He cited a broad investigation of intensive immunization and studies of diseases including undulant fever, rabbit fever and Q fever as examples of the project's research into problems that may be caused by biological warfare.

Since the contract's expiration, the Hopkins has merely provided medical treatment for Fort Detrick employees, he said.

Dr. Bennett, who is on a two-year leave of absence from his position as chairman of the pathology department at the Hopkins, pointed out that the article in *Science* mistakenly termed the Hopkins project secret.

"The whole project was unclassified," he declared.